



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Title : Motor Operated Fast Food Service Window with Upwardly Focused Proximity Detectors

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Serial No. : 09/004,803 § Examiner : Strimbu, G.

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<p>CERTIFICATE OF MAILING (37 C.F.R. 1.10)</p> <p>The undersigned hereby certifies that this correspondence is being deposited with the U.S. Postal Service as Express Mail in an envelope addressed to the Assistant Commissioner for Patents, Box After Final, Washington, DC 20231, Express Mail label number <b>EK 73 01901659US</b> ON <b>APRIL 12, 2001</b></p> <p><i>John R. Merkling</i> John R. Merkling</p>
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**37 C.F.R. 1.132 DECLARATION OF TOM KIRKALDY**

I, Tom Kirkaldy, declare that:

1. My address is P.O. Box 380, Fennville, MI 49408.
2. For at least 15 years, I have owned and operated Royal Glass and Greenhouse.
3. Among other services, my business is installing and servicing service windows, including automated service windows.
4. I am familiar with persons of ordinary skill in the art of service window design because I have been responsible for approving designs, working with

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owners of fast food establishments and with suppliers and designers of service windows for at least 15 years.

5. I am familiar with proximity sensor-operated service windows from Horton Automatic and from Ready Access. These windows have been offered for sale since at least 1986. The Horton Automatic and the Ready Access windows were an attempt to use optical proximity sensing in service windows. They featured horizontally directed sensors that detected the torso of the employee.

6. Another attempt by the industry to use proximity sensors in service windows were windows offered by both Ready Access and Horton Automatic from at least 1989. These windows featured downwardly directed sensors mounted above the service window. These sensors still detect the torso of the employee when the employee approaches the window.

7. Proximity sensor service windows which detect the torso of a person approaching the window are very sensitive to environmental factors, including, for instance, the color of clothing worn by persons approaching the window, the back ground, the number of people in the are, the ambient light, and so on.

8. As a consequence of the sensitivity of the prior designs, I have had many service calls, trying to adjust proximity sensors for changing conditions.

9. I am familiar with and have installed and serviced windows made by Quikserv Corp. having upwardly pointed proximity sensors directed upward at an angle that deviates from a vertical direction by no more than 10°.

10. The windows with this feature have an improved service record and solve the problem of oversensing and undersensing because they detect only the arms of the person approaching the window and not the torso of the person and therefore can have a very robust sensor output, that is, the emitter part of the

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proximity sensor can be very bright. Moreover, the background (e.g., the ceiling) is much more uniform and unchanging. There are, therefore, fewer false openings and closings than with other kinds of proximity sensor windows.

11. I am familiar with the level of ordinary skill in the art of service window design. I have reviewed the Applicant's application for a patent and the Jonsson '912 patent.

12. A person of ordinary skill in the art would use a door-opening proximity sensor to control a service window by aiming that sensor into an area where the torso of an employee would be sensed, rather than to sense extended arms of the employee as the employee reaches towards the window. This was done by each of the companies offering proximity sensing service windows, including applicant and applicant's competitors. In every instance known to me, except the apparatus made by Quikserv Corp., the proximity sensors were directed into an area where the torso of the employee would be sensed.

13. The Jonsson '912 patent also teaches that proximity sensors should be directed into an area where the torso of a person approaching a door would be detected. It would not teach a person of ordinary skill in the art to point the sensors upward to sense the extended arms of an employee, that is, to point proximity sensors upward at an angle that deviates from a vertical direction by no more than 10°.

14. Persons of ordinary skill in the art of service window design used proximity sensors with service windows before this invention, but did not direct the sensors upwardly to detect the arms of the employee and did not point proximity sensors upward at an angle that deviates from a vertical direction by no more than 10°. In windows with the claimed design, the torso is detected

only after the window has been opened, if the server is directly above the sensors and serving a customer, for example.

15. I believe the applicants' design with upwardly pointed sensors detecting the arms of an employee performs better than service windows with proximity sensors that detect primarily the torso of a person approaching the window.

16. Based on my experience in this field, my interaction with other designers and suppliers of service windows, and the products actually offered by this industry, a person of ordinary skill having the prior art and Jonsson '915 would still point proximity sensors into a region to detect primarily to detect the torso of a person approaching the window, as was done in the past. The person of ordinary skill in the art would not direct the sensors upwardly to detect the arms of a person and would not point proximity sensors upward at an angle that deviates from a vertical direction by no more than 10°.

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true. I declare that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

  
Tom Kirkaldy

  
Date

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